DOCUMENT RESUME

ED 112 578 EC 073 772

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TITLE A Three-Dimensional Approach to Learning Disabilities in the Secondary School.
PUB DATE 75
NOTE 32p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, D.C., March 30-April 3, 1975)

EDRS PRICE MF-$0.76 HC-$1.95 Plus Postage
DESCRIPTORS Diagnostic Teaching; Exceptional Child Education; *Identification; Instructional Materials; *Intervention; *Junior High Schools; *Learning Disabilities; Parent Participation; Parent Role; Program Budgeting; *Program Descriptions; Program Evaluation; Regular Class Placement; Team Teaching

ABSTRACT

Approximately 400 learning disabled (LD) junior high school students in eight schools were provided identification, diagnosis, and intervention services during 2 years of a program based on meeting students' needs for special help, mainstream success, and parental understanding. Program objectives included significant gains in language achievement, an increase in school attendance, and provision of information and counseling to parents. Among staff positions of the program were a speech and hearing specialist, a perceptual-motor specialist and the learning disabilities teachers. The program involved referral, screening, diagnosis, intervention, and evaluation components. Evaluation indicated that significant improvements attributable to project intervention occurred in the areas of achievement test performance, self concept, and mainstream performance. Additionally, parents indicated strong support for the home involvement aspect. Identified were 15 program strengths (such as the team approach to diagnosis and remediation) and program problems such as classroom teachers who were unfamiliar with needs of the LD child. The total cost of the program was $223,000 or $320 per student during the first year (1972-73). (Appended are lists of instructional materials and equipment and diagnostic instruments used in the program.) (DB)

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ED112578

Paper prepared for presentation to Division H,
American Educational Research Association, at
its annual meeting, March 30 - April 3, 1975,
in Washington, D.C.

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A THREE-DIMENSIONAL APPROACH TO LEARNING DISABILITIES IN THE SECONDARY SCHOOL

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APPENDICES

A. Survey of Materials and Equipment

B. Diagnostic Instruments Currently in Use

C. Learning Disabilities Handbook for Classroom Teachers

D. Project Brochure for Lay Distribution

(A third brochure, outlining the program model for school systems who may be considering adoption, is at the printer now and should be available by April 1.)

DEFINITION OF LEARNING DISABILITIES

The following definition of learning disabilities, provided by the U.S. Department of Health, Education and Welfare, is employed by this project:

> "Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage."

INTRODUCTION: THE THREE DIMENSIONAL APPROACH

For the adolesent who has a learning disability, the need for special assistance is coupled with the need to participate successfully in regular classes with his peers. In addition, such a child needs the support of parents who understand his problems and his potential; otherwise he may be frustrated or limited by their expectations. These needs -- for special help, mainstream success and parental understanding -- provide the theoretical basis for Chesterfield County's three-dimensional approach to learning disabilities in the junior high school.

Under this approach, the involvement of parents and classroom teachers as well as specialists in learning disabilities makes possible an integrated program for all junior high learning disabled students in the school system. The team of specialists provides diagnosis and an educational prescription for every student enrolled. Prescriptions are implemented in each school's "learning lab" by a learning disability teacher, aide, and perceptual-motor specialist, with help from team psychologists. Inservice and coordinated planning with classroom teachers fosters a close working relationship focused on assisting learning disabled students in the total academic program. Parents are involved through conferences, group meetings and classroom observation.

Improvements in student performance attributable to the program have been shown in academic and affective areas and in school attendance. Academic improvements have included significantly higher grades from regular class teachers in addition to higher achievement on standardized tests, indicating that the program enabled L.D. students to perform more successfully in mainstream classes than they had done before. Affirmative affective responses to

the program were received from the classroom teachers and parents involved.

The objectives, procedures, results and costs of the program are described in some detail in the following pages.

PROGRAM OBJECTIVES

Program objectives can be grouped under the three dimensions of this approach. Both student performance objectives and operational process objectives are included here.

I: In the L.D. Learning Lab,

A. Students will demonstrate significant gains ($\alpha = .05$) in
(1) The word meaning and paragraph meaning subtests of the Stanford Achievement Test (Intermediate II Battery).
(2) The reading, spelling and arithmetic subtests of the Wide Range Achievement Test (Level II).
(3) Favorable self-concept responses on the Virginia Affective Assessment Questionnaire.

B. The project staff will provide
(1) Continuing workshop experience for its members.
(2) Multidisciplinary diagnosis and prescription for each L.D. student.
(3) Materials and equipment for implementation of prescriptions.
(4) Remediation and counselling to L.D. students.

II: In the regular classroom,

A. Students will
(1) Demonstrate a two per cent increase in annual school attendance.
(2) Demonstrate a significant gain ($\alpha = .05$) in annual grade-point average.

B. Classroom teachers will
(1) Receive orientation to learning disabilities and to the junior high L.D. project.
(2) Refer students to the L.D. project.
(3) Implement prescribed activities for L.D. students in their classrooms.

III: In the homes of L.D. students and at school, the project staff will provide

A. Information and

B. Individual and group counselling, to parents.

Success on student performance objectives is measured through administration of tests and checking of school records by project staff members. Process objectives are assessed in a variety of ways: by monitoring project records,

observing project classrooms, interviewing L.D. students and staff, and distributing anonymous written opinionnaires to parents, L.D. teachers, and the teachers, counsellors and administrators at each project school. Findings have been quantified as far as possible so as to permit determination of the areas of greatest success and greatest need.

ORGANIZATION AND PROCEDURES

Eight Schools and Office Center

The number of learning disabilities teachers in each junior high school in Chesterfield County is determined by the enrollment in each school. There are eleven L.D. teachers and nine teacher aides in the eight schools. At the L.D. Center, the director, a secretary and an account clerk have their offices.

An observation room is constructed within each learning lab. This allows parents, teachers, counsellors, and visitors to observe without interrupting teachers and students. In schools where there is not sufficient space for testing, mobile labs are used. Although these labs, a total of two, permit testing and treatment with a minimum of disruption of the regular school program, they increase the cost by at least $20,000.

Staff Roles

1. Home-School Coordinator - Since the child's home environment affects his progress in school, the coordinator involves the parents by means of confidential interviews and visits. First, a case history of the child is compiled to aid the team in writing an educational prescription. Then, when the child has been diagnosed, a letter is sent to the parents explaining the results and citing the areas in which the child will be scheduled for special instruction in the learning lab. The home-school

coordinator then holds follow up conferences and group meetings to maintain parent involvement.

2. School Psychologist - The primary instrument used in the psychological evaluation is the Wechsler Intelligence Scale for Children. When analyzed, the subtest scores offer a wealth of information with regard to the child's specific strengths and weaknesses.

   In addition, perceptual, projective, and affective evaluations are performed. Afterwards, a comprehensive report on each child is prepared with the psychologist's suggestions for the regular classroom teacher. The psychologist works with the teachers, aiding them in improving the students' learning attitudes and receptiveness.

3. Speech and Hearing Specialist - This team member travels to the eight schools for diagnostic testing and therapy. After initial testing has ruled out sensory loss, further testing pinpoints difficulties in language development, speech quality, and listening skills. The therapist gives special aid to an average of 12 students per week. Although this particular specialist was used the first two years of the program, experience proved that speech and hearing problems were minimal and that the needed language services could be provided by the L.D. teachers. At present Title III does not employ a full-time speech and hearing specialist.

4. Perceptual-Motor Specialist - Associated with learning difficulties are lags in specific areas of physical and perceptual development which may affect the learning processes. Improved skills in these areas result from practice directed by the perceptual-motor specialist. This specialist is also involved in the screening of students to determine

hearing and vision problems as well as in measuring physical development.

5. Learning Disabilities Teacher - This teacher carries out initial screening. She diagnoses specific disabilities and writes a prescription based on the diagnosis. If the child is found to be learning disabled, she schedules him into the learning lab, implements her aspect of the prescription and alerts the classroom teacher to ways of compensating for the child's academic difficulties. Thus the L.D. teacher is able to strengthen the carry-over of lab work into the regular classroom.

6. Teacher Aide for the L.D. Teacher - The aide enhances the ability of the lab teacher to fulfill her responsibilities. The aide types reports, forms, and correspondence, and under the direction of the L.D. teacher often works with students, individually or in small groups, thus reinforcing teacher instruction.

7. Research Evaluator and Disseminator - This staff member has two complementary roles. The role of evaluator involves collection of data on each objective of the program and statistical analysis of the data to provide evaluative information. Evaluation results are used for formative feedback to other staff members and for a variety of reports and presentations to share project findings with others who are interested in the intermediate age learning disabled child. Also, video tapes are made for use in staff training.

Training Sessions

School Faculties - When the Title III Learning Disabilities Program was inaugurated in the eight junior high schools in the Chesterfield

County School System, members of the staff went from school to school to state the objectives and describe how these would be carried out.

Program objectives discussed with junior high teachers included setting up learning labs, identifying junior high L.D. students, providing trained personnel to work with these students, offering inservice training for teachers, and providing guidelines and assistance for parents.

In the second year of the program an orientation session was held to explain the Title III L.D. program to junior high teachers working in this area for the first time. At this session program objectives stressed during the first year were restated. A description and self-evalution of the first year were given. A video presentation, group discussions led by staff members, and a meeting of staff members at the Center completed this session.

During each school year, additional in-service help is provided to teachers on an individual basis. As each student is accepted for the learning lab, the L.D. staff meets with his classroom teachers to discuss findings and to recommend what will be best to insure progress and development for that student.

Training sessions for regular classroom teachers are supplemented by brochures, regular information sheets, reference materials, and a handbook designed especially for their needs.

Title III Staff - Regular training sessions for the L.D. staff are held at the office center, where specific materials and teaching suggestions are presented. In addition, a monthly speaker's meeting is scheduled and hosted by one of the L.D. teachers in her school.

Speakers have included members of the project's advisory committee and other local professionals in fields related to learning disabilities.

Having speakers from the immediate community has served a two-fold purpose: to provide the L.D. staff with information on services available in this geographic area, and to disseminate information about the project to others who are interested in L.D. students.

All training sessions are coordinated by the project director.

Identifying Learning Disabled Students

Referral and Screening - Referrals are initated by classroom teachers. Although some "L.D." signs may result from other types of learning problems, all likely students should be referred. Screening by Title III specialists eliminates the misplacement of students who need a different sort of program.

In preliminary screening, the referral is examined for evidence suggesting a learning disability. Emphasis is placed on the inconsistent performances -- clearcut "highs" and "lows" -- which characterize the child with overall intellectual ability but apparent neurological dysfunction. This discrepancy between potential and achievement is the key to the effectiveness of learning disability treatment.

Diagnosis and Prescription - If evidence of characteristic discrepancies does appear on the referral, complete diagnosis is conducted to pinpoint strengths and weaknesses and to plan a comprehensive program of remediation, compensation, counselling, and home involvement. Each member of the diagnostic team conducts interviews and/or tests for a detailed picture of the student's learning style and social environment. Then in a diagnostic conference, or "staffing", the team generates

academic and social prescriptions for the student.

If a team diagnosis leads to the conclusion that the student does not have a learning disability but a different kind of problem, he is not enrolled. Instead, a report is written concerning the student's strengths and weaknesses with suggestions for improving his adjustment and progress in school.

Intervention

Learning lab enrollemnt can begin or end at any time during the school year. Likewise, the student can return to regular classes whenever he is prepared to do so.

Scheduling usually follows ont of three patterns. If enrollment is planned before the opening of school, lab periods can be scheduled in place of an elective course. If enrollment begins later in the year and it is feasible, a lab period may replace an elective. In other cases required classes must be missed and plans made to insure progress in subject or subjects affected.

Lab Activities - During the day students move out to the lab for classes as their prescriptions indicate. Some students may spend one period per day while others may spend two or three periods in the lab.

Classroom Teacher Coordination - Material developed by the staff for classroom teachers provides some general help in areas of language arts, math, handwriting, science, and social studies. L.D. teachers also work with the regular teachers to help them understand the special needs of specific students.

Parent Participation - After the home-school coordinator has involved parents by means of confidential interviews and visits to the home, a letter is sent to explain the child's evaluation. Then parents are invited to participate in regular parent group meetings to share their experiences and feelings. It is very important for the coordiantor and the L.D. teacher to maintain contact with the parents and to keep them informed as to the child's development and progress.

Follow-up

Enrollment in the learning lab in junior high can last from a few months to three years, depending on the need. More severe disabilities may require lab intervention throughout the student's formal education. For many students, however, skills can be taught which will minimize the effect of a sepcific disability on classroom learning. Continuing progress usually depends on working around the disability on an everyday basis in the classroom.

When the L.D. teacher feels that a student has learned to cope independently with regular classes, she returns him to his regular schedule. If the student experiences difficulty, the classroom teacher can re-refer him to the lab.

Dissemination

Observing the program in action has proved to be the most effective means of dissemination. Thus visiting and viewing the lab from special observation rooms has been encouraged. Othe conventional methods of dissemination used include brochures; lectures and slide presentations at local, state, national, and international meetings; radio and T.V.

programs over local stations; articles and features in state newspapers, educational magazines, and school system publications.

EVALUATION DESIGN AND RESULTS

Ongoing evaluation of program processes and student performance has been conducted each year by the Research Evaluator. Process evaluation has helped to pinpoint the procedural strengths of the program and the problems to be dealt with. Performance evaluation has assessed student progress in eight product objective areas: self-esteem, school attendance, grade-point average, and academic achievement in word comprehension, paragraph comprehension, word recognition, arithmetic computation and spelling. A three-year study of student performance during and after enrollment in the lab will be completed at the end of the program's funding period.

Student Performance Objectives: Learning Lab and Mainstream Class

Did the project treatment enable L.D. students to perform better than they would have performed without the treatment? To answer this question, the product evaluation was designed to compare the pre-enrollment and post-enrollment performance of students who participated in the project with the performance of students who did not. Such variables as grade level, I.Q., race and school attended were controlled in the selection of comparison groups.

Selection of comparison groups was hampered by the ethical necessity of providing the project treatment to every child identified as learning disabled. This meant that the control group had to be drawn from a different population, from students who were not learning disabled. The initial difference between comparison groups was undesirable; however, it was for the most part statistically controlled. The students' ability (I.Q.) was kept comparable through matching in the sampling procedure. An initial difference in achievement levels

was controlled by pairing each student's pre and post scores and comparing the relative changes in each group rather than comparing absolute scores. A greater change among L.D. students than control students was interpreted as a positive response attributable to the program. Significance was tested with a t statistic, without the assumption of a common population variance.

During the project's first two years, significant improvements attributable to project intervention were made by L.D. students in standardized tests of four academic skills: paragraph comprehension, word recognition, arithmetic computation and spelling. Only in word comprehension was there no statistical evidence of improvement.

Improvements in self-concept were found during the first year of participation but not during the second.

Gains also were made in mainstream performance. While no substantial change was found during the first year of participation, the second year brought significant improvements in grade point averages and school attendance among L.D. students.

Progress Attributable to L.D. Intervention:
Standardized Tests of Academic Achievement

CRITERION	IMPROVEMENT (1972-74)
Stanford Achievement Test, Intermediate II: Word Meaning	none
Stanford Achievement Test, Intermediate II: Paragraph Meaning	65%
Wide Range Achievement Test, Level II: Reading	60%
Wide Range Achievement Test, Level II: Arithmetic	47%
Wide Range Achievement Test, Level II: Spelling	23%

Progress Attributable to L.D. Intervention:
Self-Concept

CRITERION	IMPROVEMENT (1973-74)
Virginia Affective Assessment Questionnaire	10%

Progress Attributable to L.D. Intervention:
Mainstream Performance

CRITERION	IMPROVEMENT (1973-74)
Annual Grade Point Average	5%
Annual Attendance at School	10%

Process Objectives: The Home

While all process objectives have been evaluated, only those dealing with parent contact will be reported here. The purpose is to amplify our discussion of this third component of the program.

Several channels have been used regularly by the home-school coordinator, sometimes aided by a staff psychologist or teacher, to provide information and counselling to parents of L.D. students. When a child is staffed, a letter is sent to his parents to explain the results of diagnosis and the prescription. A follow-up telephone call is also made and parents are asked if they would like to meet with the coordinator or psychologist to discuss staffing results more fully. Once the child is enrolled in the learning lab, his parents have

three optional ways of keeping up with his progress: meeting individually with the lab teacher, observing their child in the lab and attending group meetings with other parents of L.D. students. The last two activities are arranged by the home-school coordinator.

A descriptive brochure prepared for lay distribution (see Appendix D) was mailed to parents during 1973-74 to better acquaint them with the L.D. project.

Anonymous written opinionnaires were distributed to parents of enrolled students in the Spring of 1974. Among the 118 (49%) which were returned, the following evaluations of parent contact activities were found.

ACTIVITY	Number of Respondents Who Gave a Rating	Number and % of Ratings Given	
		Excellent Or Good	Fair or Poor
1. Letter from Home-School Coordinator	94	88-94%	6 - 6%
2. Conference with Home-School Coordinator	61	59-97%	2 - 3%
3. Conference with Psychologist	50	45-90%	5 -10%
4. Conference with L.D. Teacher	61	55-90%	6 -10%
5. Observation of Learning Lab	34	32-94%	2 - 6%
6. Meeting with L.D. Parent Group	49	43-88%	6 -12%
7. Brochure describing L.D. Program	61	55-90%	6 -10%

The opinionnaire also asked parents to assess the need for more communication:

Do you feel more communication between the project staff and parents is needed?	Number of Respondents	Number and % of Responses	
		YES	NO
	107	45-42%	62-58%

Specifically, many parents expressed a desire for periodic progress reports from the L.D. teachers to supplement the existing information channels.

The importance attached by parents to the home-involvement component of the program was confirmed by these results.

Programmatic Strengths and Problems

Strengths of the Program

1. Excellent cooperation from the counsellors and teachers in each school in referring, scheduling, and working with the L.D. teacher and the team.
2. The team approach used in the diagnosis and evaluation of each L.D. referral followed by a team staffing at which a prescription is written pinpointing areas of difficulty and ways of remediation.
3. Hearing and vision screening tests administered to all students staffed for L.D.
4. The L.D. teacher in each school who puts the prescription into action and informs parents and regular classroom teachers of the prescription.

5. Progress of L.D. students which is followed closely by each team member.
6. A teacher aide who has had the required inservice paraprofessional training and is available not only to assist in working with the students, but also to handle typing of all reports and other clerical duties in each of the L.D. labs.
7. A resource room program in which each students spends from two to seven hours per week in the learning lab, depending upon his needs, while participating in the regular school program.
8. Regular sessions for perceptual-motor skill building and the setting up of learning stations in order to strengthen the student's ability to carry out perceptually oriented tasks.
9. Weekly inservice training meetings for the L.D. teachers and team members.
10. Observation rooms with one-way mirrors in each school for parents, school personnel, and other professionals interested in observing an L.D. lab in operation.
11. A strong, active advisory council which has continually been involved in the development of the program.
12. Regularly scheduled monthly meetings which provide a professional speaker from a related field outside education who has a real interest in the L.D. student.
13. Assistance in the lab, where needed, with regular class assignments: taping portions of texts, administering oral tests for the regular teacher, and some assistance in day-to-day assignments.
14. An individualized approach to the problems of each student.

15. Continuous follow-up for each L.D. student with programs altered when a given procedure is not achieving desired ends.

Problems and Solutions

Problem: Classroom teachers who had not worked with learning disabled students did not understand their problems or the manner in which they should work with them.

Solution: Inservice sessions, good communication with L.D. teachers, and a handbook published for the classroom teachers involved in the program have helped to alleviate this problem.

Problem. Several team members often visited a school at the same time and wished to work with the same student.

Solution: Master schedule posted in the Center has only one team member in a school on a given day.

Problem: Staffing for each student was held in his school in order for all classroom teachers and principal to attend. This required too much travel time on the part of Title III team members.

Solution: The staff was divided into two teams which meet at the L.D. Center on alternate Fridays. The L.D. teacher from each school comes at a specified time and meets with either Team I or Team II.

Problem: One psychologist was unable to do all necessary testing and compiling of comprehensive reports; one perceptual-motor specialist did not have time to screen students in specific areas of physical and

perceptual development as well as in vision and in hearing.

Solution: An additional psychologist and an additional perceptual-motor specialist were employed.

COST AND EXPORTABILITY

The cost of this program, now in its third year, is approximately $223,000 annually. A breakdown of projected costs for the first year -- office equipment, materials and other necessary equipment, and salaries -- is included in this section of the paper.

Students Served

Of the 2,020 students who began junior high school in Chesterfield in 1972-73, approximately 600 were referred to the Title III Learning Disabilities Project. Of this number, 215 each received a diagnostic and prescriptive work-up with 166 being diagnosed as learning disabled and receiving intensive assistance from the staff. Again in 1973-74 more than 600 first-year students were referred to the project. Of those, 234 each received a diagnostic and prescriptive work-up and 192 were given learning disabilities assistance.

Records of the other students referred were examined, and it was determined that no learning disabilities were evident. Teachers and parents, therefore, could look for other causes for students' failing to make normal progress. It should be noted, however, that the team will examine a student's record again should teacher observation indicate that a learning disability exists. The teacher will, of course, again refer the student if she feels it is necessary.

With an operational cost of $320 per student during the first year, it is gratifying to note that 52 of those attending the lab were returned to the regular classroom by the close of the year. An additional 155 received sufficient lab assistance in 1973-74 to return full-time to other classes. Enrollment periods in the lab have ranged from two months for some students to more than two years for others.

TITLE III L.D. PROJECT BUDGET - 1972-73

Salaries

Director	$19,000
Secretary	5,000
Psychologist	11,300
Home-School Coordinator	9,500
Teachers (10)	86,529
Teacher Aides (8)	16,000
Clerk Typist	3,500
Research Evaluator	12,000
Travel - Director	1,200
Travel - Consultants	500
Travel - Instructional	3,000
Substitutes	720
Dissemination	1,000
Inservice Education	1,000
Auditor	500
Instructional Supplies	8,000
Supplies - Director	1,000
Dissemination - Mat. & Supplies	1,000
Evaluation - Mat. & Supplies	500
Xerox	1,000
FICA, Retirement, Ins.	7,451
Remodeling	6,000
Mobil Unit & Classroom Equipment	27,300
Total	$223,000

Program Adoption

How much of this program a particular school system wishes to use will depend on the organization and size of the system and how much building space is available. For example, if the school system employs a sufficient number of psychologists to work with the students and provide the necessary testing, it will not be necessary to hire psychologists as team members. The schools may have a central referral system. If so, it will not be necessary for lab teachers to make referrals to the Center, thus giving them more time for teaching in the lab.

This paper offers the reader a view of what is being done in Chesterfield County Schools through the Title III Learning Disabilities Program now in effect in the junior high schools.

SIGNIFICANCE FOR EDUCATION

Because of its importance as a transitional period, the junior high level offers an opportunity to prepare learning disabled students to function effectively in mainstream environments. At school this calls for supplementing resource room programs with mainstream assistance. While skills learned in the resource room can help to minimize the effect of a specific disability, continued progress depends on compensating for the disability on an everyday basis in the classroom. Understanding and support from parents can reinforce a positive approach to school and a positive attitude toward the self. In school systems where this begins in junior high, the student learns to cope with situations that he will want to face independently in high school. The program is expected to reduce failure rate and drop-out rate at the senior

high school level, utilizing and making available for later productivity in adult life the potentialities of the average and above-average student.

APPENDIX A

SURVEY OF MATERIALS AND EQUIPMENT FOR JUNIOR HIGH LEARNING DISABLED STUDENTS IN SPECIFIC SUBJECT AREAS

The following lists represent a wide range of commercially available materials and equipment found by L.D. teachers in the Chesterfield program to be generally useful with junior high learning disabled students. As such, the lists include only about one-third of the commercial materials used by one or more teachers in the program, since individual teachers frequently select additional materials which particularly suit their students and their teaching styles. The lists also do not cover teacher-made materials, which are an essential, highly individualized resource in Chesterfield learning labs.

Prices are correct as of the dates in parentheses.

LANGUAGE ARTS

Multimedia Kits

Right to Read - Hartford Publishing Co.
Books, Filmstrips, Cassettes - $200.00 (6/74)

Mini Bike Classroom Kit - Bomar Records, Inc.
$32.99 (5/73)

Reach - The Economy Co. Individualized Inst., Inc.
Pacetapes & Workbooks - $149.00 set ((6/74)

Programmed Phonics - Educators Pub. Serv. Inc.
Tapes - $20.00 set
Workbooks - $1.00 ea. (3/73)

Checkered Flag Series - Field Education Publications
Books - $225 - Recordings - $4.20 - Cassettes -$10.50
Filmstrips - $9.60 (6/74)

Walt Disney Reading Adventure Series - Walt Disney Educational Materials
$197.22 (5/74)
Walt Disney Filmstrips & Tapes - $85.00 - $114.00 set (5/74)

Printed Materials

Scope Reading Skill Series - Scholastic Book Service
Workbook - .90 ea. (6/73)

Action Library - Scholastic Book Service
$30.00 set (5/74)

LANGUAGE ARTS (Cont'd)

Printed Materials (cont'd)

Conquests in Reading - Webster-McGraw Hill
Text Workbook - $1.44
Teachers Ed. - $2.10 (5/74)

Wordly Wise - Educators Publishing Co.
Book - $1.50
Teachers Guide - $1.00 (6/74)

SRA Reading Lab - Science Research Assoc.
$74.95 (5/73)

Webster Reading Lab - Webster-McGraw Hill
$130.00 (5/73)

Mott Basic Language Skills - Allied Educational Council
$1.25 ea. (5/73)

Language Training for Adolescents - Educators Publishing
Workbook - $1.50
Teacher Guide - $4.00 (73)

Specific Skill Builders - Barnell Loft, Ltd.
Complete Set - $58.53 (5/74)

Phonics We Use - Lyons & Carnahan
Booklets - .63 ea. (5/74)

English 2600, 2600, 3200 - Harcourt Brace Jovanovich
$2.70, $3.00, $3.15 ea. (73)

Gillingham Manual - Educators Publishing Co.
7th ed. (green) - $12.50
Supplementary materials - $3.00 - $12.00 (73)

Spell/Write - Noble & Noble Publishers, Inc.
Student Ed. - $2.55
Teacher Ed. - $2.04 (4/74)

Dr. Spello - Webster-McGraw Hill
$1.80 (5/73)

Spellbound - Educators Publishing Serv.
Workbook - $1.90
Teachers Manual - $2.00 (9/72)

Follett Spelling/Writing Series - Follett Publishing Co.
Student - $1.08 - Teachers Ed. - $1.38 (74)

LANGUAGE ARTS (Cont'd)

Equipment

Language Master - Bell & Howell
$250.00 (75)
Program cards - range from $35.00 - $114.00 set

Reel-to-Reel Tape Recorder - Wollensak
$209.00 (6/74)

Cassette Tape Recorder - Wollensak
$69.00 (6/74)

Study Mate - Grafex
$34.50 (72)

Controlled Reader - Educational Developmental Laboratories
$220.00
Filmstrip sets - McGraw-Hill
$87.50 ea. (74)

Filmstrip Projector

Games

Ends and Blends - J.L. Hammett Co.
$4.50 (5/74)

MATHEMATICS

Instructional and Supplementary Materials

Attribute Blocks - Webster-McGraw/Hill
$9.60 (73)

Cuisenaire Rods - Cuisenaire Co. of America
Small set - $39.00 (7/73)

Developmental Math Cards - Addison-Wesley Pub. Co.
Kit - $3.96 (11/72)

Fraction Bars Math Lab Set - Creative Publications
$84.00 (6/74)

Metri Kit - Dick Blick Co.
$125.80 (6/74)

Spectrum Math Series - Laidlaw Brothers
$1.32 - (73)

MATHEMATICS - (Cont'd)

Instructional and Supplementary Materials -(cont'd)

S.R.A. Computational Skills Development Kit - Science Research Assoc.
$93.85 (74)

Tangrams - Webster McGraw/Hill
Teachers Guide - $1.92
Cards - $4.62 - Pieces -$2.60 (5/73)

Mastering Mathematics - W.H. Sadlier, Inc.
Booklets - $1.47 - Duplicating Masters - $9.87
Workbooks - $2.16 (5/74)

Fun and Games with Mathematics - Prentice-Hall Learning Systems, Inc.
$9.95 (74)

Step by Step Arithmetic - The Continental Press
$59.50 set (5/74)

Money Makes Sense
Using Dollars and Cents - Fearon Publications
$2.00 ea. (11/74)

Equipment

Language Master - Bell & Howell
$250.00
Program cards - range from $35.00 - $114.00 ea.. (75)

Abacus - Houghton-Mifflin
$2.40 (11/73)

Games

Winning Touch - Ideal School Supply
$5.50 (6/74)

PERCEPTUAL-MOTOR AREAS

Gross-Motor Coordination

Jump Ropes - Olympic Skip - ABC School Supply
$1.50 ea. (5/73)

Doorway Gym Bar - ABC School Supply
$7.95 (6/74)

Fine Muscle Coordination

Ozeretsky Tests of Motor Proficiency - American Guidance
$30.00 (73)

D-Stix Set - ABC School Supply
$8.95 (5/74)

Rig-a-Jig Set - J.L. Hammett Co.
$12.50 (4/74)

Penmanship Step-by-Step - Zaner Blosser Co.
.75 (3/73)

Trac-A-Bit - Zaner Blosser Co.
$2.46 (3/73)

Typewriter (manual) - Sears & Roebuck
$49.88 (8/72)

Red-White-Blue Design Tiles - The Interstate Printers & Publishers
$10.90 (6/73)

Visual and Visual-Motor Skills

Coordination Paddles - Educational Playthings
$6.50 (5/74)

Tennis Deck Rings - ABC School Supply
$1.95 (2/74)

Kaleidoscope Puzzles - J.L. Hammett Co.
$2.50 (4/74)

PERCEPTUAL-MOTOR AREAS - (Cont'd)

Visual and Visual-Motor Skills - (cont'd)

Building Beads & Patterns - Special Education Materials, Inc.
$5.50 (6/73)

Michigan Tracking Series - Ann Arbor Publishers
Visual Tracking - $2.25 set
Word Tracking - $2.25 set (5/74)

Cues and Signals Workbook - Ann Arbor Publishers
$1.65 (5/74)

Climax Game - ABC School Supply
$3.95 (5/74)

Attribute Games & Problems - Webster/McGraw Hill
Cards & problems - $7.11
Games & problems - $9.60 (11/73)

Visual Memory Cards - Developmental Learning Materials
$3.25 (6/73)

Tangrams - Webster/McGraw Hill
Teachers Guide - $1.92 - Cards - $4.62 - Pieces -$2.60 (5/73)

Multi-Skill

Bean Bag Baseball - ABC School Supply
$2.95 (6/74)

Card Sorting Box - Special Education Materials, Inc.
$29.00 (6/73)

A Multitude of Perceptual Activities - Ann Arbor Publishers
$2.25 (5/74)

Chuck-a-Hoop Set - ABC School Supply
$2.50 (2/74)

Nimble Game - Childcraft Educational Corp.
$8.95 (5/74)

Peg Board - Developmental Learning Materials
Board - $1.50
Pegs - $2.75 (72)

PERCEPTUAL-MOTOR AREAS - (Cont'd)

Multi-Skill - (cont'd)

Design Blocks - School Specialty Supply Co.
$3.25 (9/72)

Labyrinth - ABC School Supply, Inc.
$13.50 (6/74)

Balance Beam - School Specialty Supply Co.
$26.75 (5/74)

Auditory Skills

Sound Sight Skills Workbook - Educational Activities, Inc.
$45.00 set (74)

Directionality

Twister Game - School Specialty Supply Co.
$5.00 (72)

Lummi Sticks

Handbooks

Gillingham Manual - Educators Publishing Serv.
7th ed. (green) $12.50 (74)

A Psychoeducational Inventory of Basic Learning Activities - Valett
$12.00 (74)

Sensory Acuity

Titmus Vision Tester - $515.00 (74)

Maico Portable Audiometer - $150.00 (70)

APPENDIX B

DIAGNOSTIC INSTRUMENTS CURRENTLY IN USE

ADMINISTERED BY PERCEPTUAL-MOTOR TEACHERS

Psychoeducational Inventory of Basic Learning Abilities (Valett)
Auditory Discrimination Test
Ozeretsky Test of Motor Development
Titmus Vision Test

ADMINISTERED BY EDUCATIONAL SPECIALISTS

Wide Range Achievement Test (Jastak)
Informal Math Inventory (locally developed)
Informal Reading Inventory (locally developed)
Specific Language Disability Test (Malcomesius)
Group Diagnostic Reading Aptitude and Achievement Tests (Monroe)
Diagnostic Reading Scales (Spache)
Stanford Achievement Tests - Reading - Intermediate II
Virginia Affective Assessment Questionnaire

ADMINISTERED BY PSYCHOLOGISTS

Developmental Test of Visual-Motor Integration (Beery)
House-Tree-Person
Wechsler Intelligence Scale for Children
Bender Gestalt Test
Sentence Completion Test